

b.) Claims

Please cancel claims 2-4, 7-13, 16, 17 and 28 without prejudice, and amend the claims as follows:

1. (Currently Amended) A method for the reduction of fouling of process components within a liquid hydrocarbon stream comprising the steps of:

applying ~~an~~ a continual electric charge to an object within ~~the~~ a flow path of said liquid hydrocarbon stream, wherein ~~said electric charge is applied substantially continuously throughout said process, and wherein~~ said liquid hydrocarbon stream contains at least one contaminant ~~contaminants~~;

flowing said liquid hydrocarbon stream past said continual electric charge; and then adjusting the magnitude of said continual electric charge while continuing said flowing step.

Claims 2-4: (Cancelled)

5. (Currently Amended) The method according to Claim 1, wherein said object is ~~step of~~ ~~applying an electric charge to an object comprises applying an electric charge~~ to a heat exchanger.

6. (Currently Amended) The method according to Claim 5, wherein said step of applying ~~an~~ a continual electric charge ~~to a heat exchanger~~ comprises applying an electric charge to the chassis or shell of said heat exchanger.

Claims 7-13: (Cancelled)

14. (Currently Amended) The method of Claim 1, further comprising determining a ~~the~~ level of contaminants in the liquid hydrocarbon stream.

15. (Currently Amended) The method of Claim 14 wherein said step of determining a level of contaminants utilizes measurement of the turbidity of the fluid stream or an analytical measurement indicative of contaminant concentration of the liquid hydrocarbon stream.

Claims 16-26: (Cancelled)

27. (Currently Amended) A method for improved hydrocarbon refining efficiency comprising the steps of:

catalytically cracking a liquid hydrocarbon mixture to produce an output mixture enhanced in low molecular weight liquid hydrocarbons relative to said hydrocarbon mixture;

separating by distillation said output mixture into petroleum fractions;

drawing a liquid hydrocarbon stream from said petroleum fractions;

flowing said liquid hydrocarbon stream through a heat exchanger;

repeating said step of separating or said steps of catalytically cracking and separating on said liquid hydrocarbon stream;

applying ~~an~~ a continual electric charge to an object within ~~the~~ a flow path of said liquid hydrocarbon stream, ~~wherein said electric charge is applied substantially continuously throughout said process;~~

flowing said liquid hydrocarbon stream past said continual electric charge; and [[,]]

adjusting the magnitude of said continual electric charge while continuing said flowing step.

28. (Canceled)

Please add the following new claims 29-39:

29. (New) A method for the prevention of process component fouling within a liquid hydrocarbon stream, comprising the steps of:

initiating an electric charge to one or more process components for contacting a liquid hydrocarbon stream, wherein said liquid hydrocarbon stream contains at least one contaminant;

initiating a flow of the liquid hydrocarbon stream past the electric charge and the one or more process components;

continuously applying the electric charge to the flowing liquid hydrocarbon stream; and then

adjusting the electric charge as the liquid hydrocarbon stream flows in fluid communication with the one or more process components.

30. (New) The method according to Claim 29, wherein the one or more process components comprises a heat exchanger.

31. (New) The method according to Claim 30, wherein the electric charge is applied to a chassis or shell of said heat exchanger.

32. (New) A method for processing a liquid hydrocarbon process stream, comprising:
initiating a process run of a liquid hydrocarbon process stream through one or more process components adapted to exchange heat with the liquid hydrocarbon process stream;
initiating an electric charge to at least one of the one or more process components;
flowing the liquid hydrocarbon process stream in fluid communication with the at least one of the one or more process components having the electric charge applied thereto; and
continually applying the electric charge to the at least one of the one or more process components during the process run while the liquid hydrocarbon process stream is in fluid communication therewith.

33. (New) The method according to Claim 32, further comprising terminating the electric charge to the at least one of the one or more process components after the process run.

34. (New) The method according to Claim 32, further comprising adjusting the electric charge to the at least one of the one or more process components during the process run.

35. (New) The method according to Claim 32, wherein the one or more process components comprises a heat exchanger.

36. (New) The method according to Claim 35, wherein the electric charge is applied to a chassis of said heat exchanger.
37. (New) The method according to Claim 35, wherein the electric charge is applied to a shell of said heat exchanger.
- 38 (New) The method according to Claim 33, further comprising adjusting the electric charge to the at least one of the one or more process components during the process run.
39. (New) The method according to Claim 32, further comprising stopping the flow of the liquid hydrocarbon process stream prior to stopping the application of the electric charge.